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RAPID RESEARCH

July 2022

Inside This Week: Pronator Teres Syndrome

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- ✓ Case Study: Rare & Severe Pronator Teres Syndrome

 - ✓ Prevalence of Pronator Teres Syndrome in Patients with Carpal Tunnel

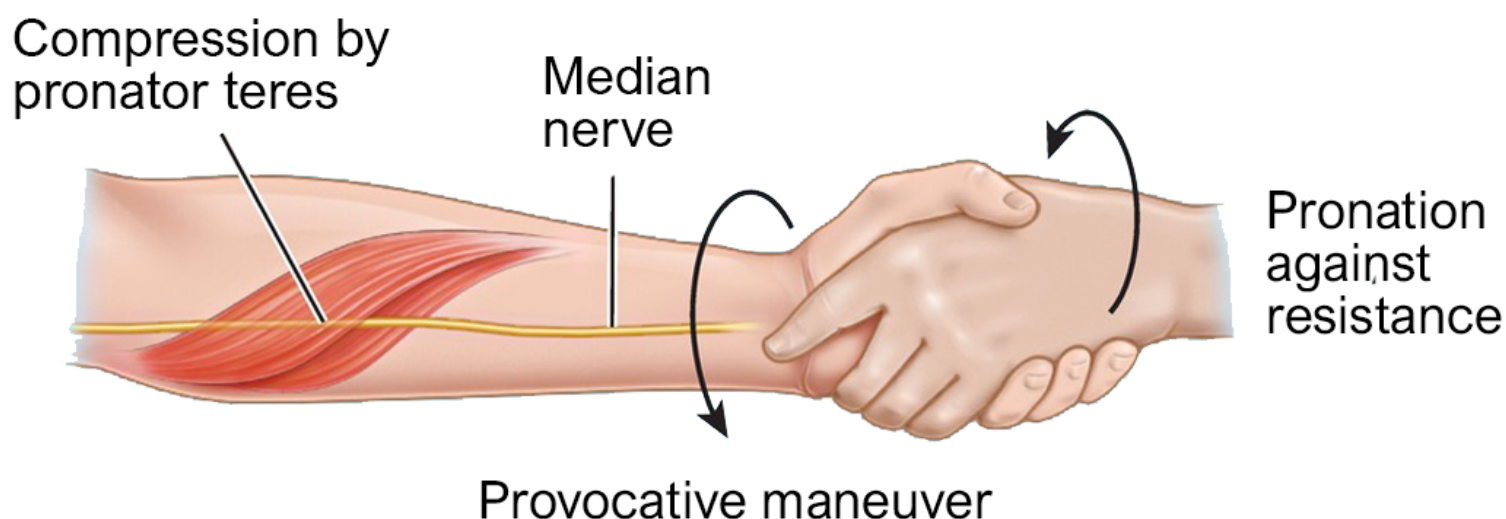
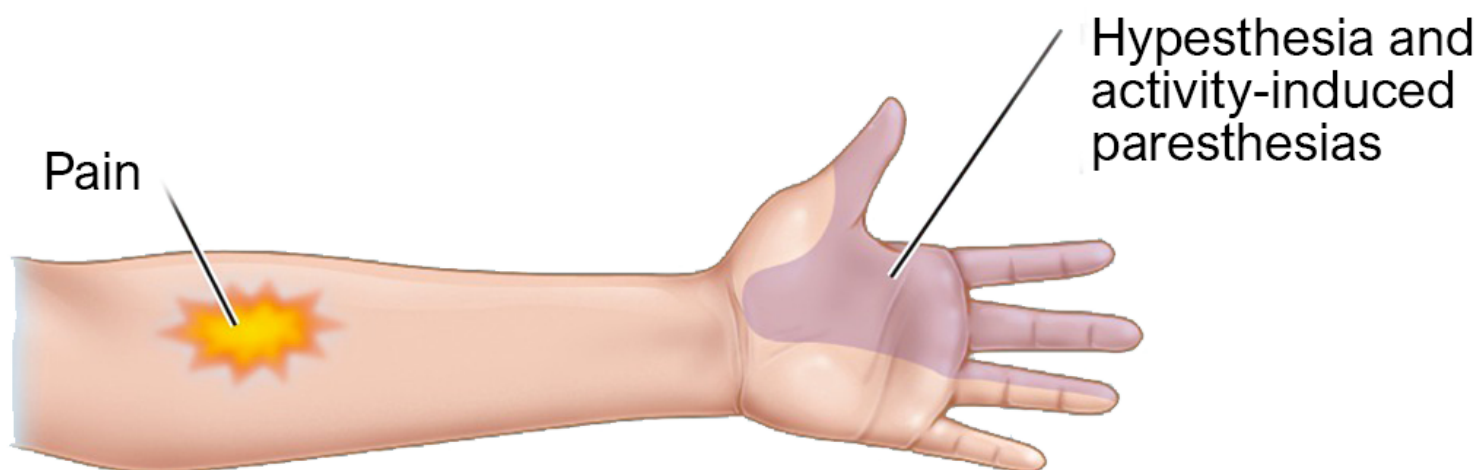
 - ✓ Outcomes of Surgery for Pronator Teres Syndrome



CASE STUDY: RARE & SEVERE PRONATOR TERES SYNDROME

[Click for Full Text
\(Moura & Agarwal
2020\)](#)

This research showcased a patient suffering over a course of 5 years with combined pronator teres syndrome (PTS) and anterior interosseous nerve syndrome (AINS)



KEY FINDINGS

57-year-old chef, 5-year history of progressive weakness and decreased function affecting his left non-dominant hand.

Initial symptoms comprised mild numbness to the middle finger, progressing to the index finger and thumb with weakness of grip and pinch and increasing forearm pain and complete loss of strength in the thumb and index fingers.

Assessment of the left upper limb revealed wasting of the thenar eminence along with subtle wasting of forearm musculature.

Motor testing showed complete paralysis of the flexor pollicis longus (FPL), as well as both flexor digitorum profundus and flexor digitorum superficialis (FDS) of the index finger.

He was promptly operated for exploration and release of the proximal MN under general anesthetic.

MAIN TAKEAWAYS

Operation released the FDS arch and following the nerve and its AIN component into the mid forearm.

Improvement of pain and sensory symptoms within 4 weeks and improvement in grip and pinch in 8 weeks.

The Tinel had migrated distally by at least 5 cm in the 8th postoperative week at which point flexion of the thumb interphalangeal joint improved to grade MRC 1/5.

He continues to make good progress and has since returned to work.

PREVALENCE OF PRONATOR TERES SYNDROME IN PATIENTS WITH CARPAL TUNNEL

[Click for Full Text
\(Asheghan et al. 2016\)](#)

This study determined the prevalence of PTS among patients with CTS, via EDX data, clinical manifestations, and demographic characteristics in patients with the two syndromes.

Tinel's Sign

Pronator
Teres
Syndrome



KEY FINDINGS

148 participants, Avg age: 51.4

81(54.7%) right and 67 (45.3%) left Carpal Tunnel Syndrome.

13 (8.8%) patients presented electrodiagnostic, and 27 (18.2%) had clinical manifestations of Pronator Teres Syndrome.

Age was not significantly different between the patients with, and without pronator teres syndrome.

Taken together, pronator teres syndrome should be considered as a possibility among patients with carpal tunnel syndrome especially in severe forms.

Both electrodiagnostic and sonographic studies are efficient for diagnosing pronator teres syndrome.

MAIN TAKEAWAYS

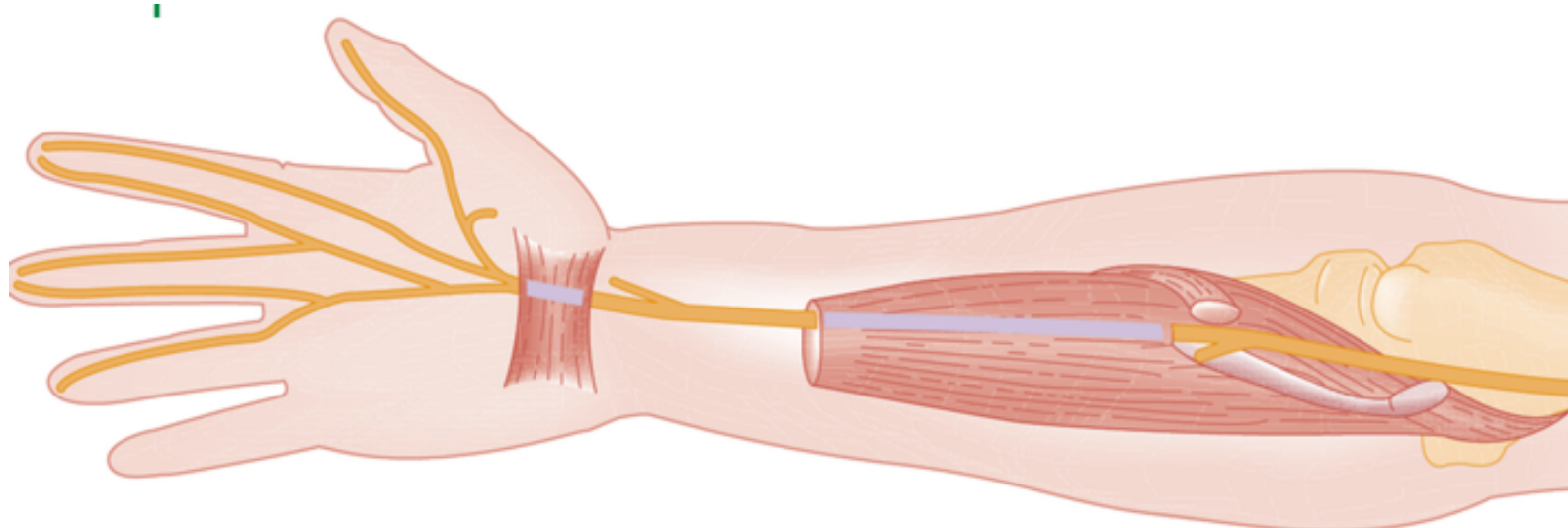
Results have 2 important implications for the workup of patients with CTS.

1. Because of overlapping symptoms or the possibility of coexisting pathology, patients with CTS have to be carefully evaluated for the presence of PTS.
2. PTS should be confirmed with ultrasonography or EDX studies, especially when the patient is a candidate for surgery.

OUTCOMES OF SURGERY FOR PRONATOR TERES SYNDROME

[Click for Full Text
\(Binder et al. 2022\)](#)

This research aimed to elucidate the occurrence of postoperative carpal tunnel syndrome (CTS), the functional outcome of patients with primary pronator teres syndrome (PTS), and review complete literature regarding this topic



25 studies included in this review.

[7 specimen studies, 10 case reports, & 8 retrospective analysis]

26 patients out of 572 with peripheral nerve compression syndromes (CTS, PTS, double crush) were identified with PTS symptoms at the orthopedic ward, presenting an overall incidence of PTS of 4.5%

10 female & 2 male patients were included:

Significant improvement in DASH and numeric VAS was detected at postoperative follow-up.

In 3 patients, clinical signs of CTS were detected during the follow-up period. 1 needed to be treated surgically, in 2, conservative management was possible.

In one patient (8%), a PTS recurrence was detected.

All patients presented satisfied at latest follow-up.

MAIN TAKEAWAYS

Isolated PTS is reported very rarely in literature. Often, misdiagnosis caused by overlapping symptoms of CTS and PTS leads to insufficient surgical and clinical outcome.

25% of patients presented with CTS during follow-up.

Therefore, focusing on double-crush syndrome and mixed symptoms is necessary to avoid multiple operations in this patient collective.

Furthermore, it seems that assessment with NCV is not enough for diagnosing PTS.

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